November 11, 2003

Marlene H. Dortch, Commission Secretary
Federal Communications Commission, Office of the Secretary
445 12th Street, SW
Washington DC 20054

Re: FCC Notice of Inquiry, WT Dkt. No. 03-187

Dear Federal Communications Commission:

These comments are submitted on behalf of American Bird Conservancy, Forest Conservation Council, and Friends of the Earth in response to the FCC Notice of Inquiry (NOI) in WT Dkt. No. 03-187, FCC 03-205, as published in the Federal Register of September 12, 2003, Volume 68, Number 177, Pages 53696-53702. The NOI seeks comment and information on the impact that communications towers have on migratory birds

I. FCC SHOULD IMMEDIATELY ACT TO COMPLY WITH NEPA, MBTA, AND ESA.

The FCC is currently and has been for years in violation of the National Environmental Policy Act (NEPA), Migratory Bird Treaty Act (MBTA), and the Endangered Species Act (ESA) under its current system of authorizing, licensing, approving, and registering communication towers. The NOI does not correct these violations of Federal environmental laws. The FCC has been aware of these serious deficiencies and illegal operations for over 4 years as the U.S. Fish and Wildlife Service (FWS), the undersigned groups, many other groups, and appellants in tower cases have repeatedly documented bird kills caused by towers. The FCC has received extensive information indicating that communication towers are a significant and continuing source of mortality to migratory birds. Despite this documentation, the FCC has refused to alter its tower registration, approval, licensing, and regulatory programs to better protect migratory birds and instead is conducting a NOI that requests information the FCC already possesses and that proposes no changes and, thus, maintains the status quo.

A. COMPLIANCE WITH NEPA REQUIRED.

We would emphasize that the NOI does not relieve the FCC from full compliance with NEPA, 42 U.S.C. §§ 4321 *et seq*, and its implementing regulations. Section 102(2)(C) of NEPA requires federal agencies to prepare an EIS for all "major" federal actions significantly affecting the quality of the human environment. 16 U.S.C. § 4332(2)(C). In determining whether a federal action significantly affects the quality of the human environment, all direct, indirect, and cumulative effects of an action must be assessed. CEQ regulations require agencies to consider three types of actions when preparing an EIS: 1) "connected actions," which means they are closely related and therefore should be discussed in the same impact statement; 2) "cumulative actions," which when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same impact statement; and 3) "similar actions, which when viewed with other reasonably foreseeable or proposed agency actions, have similarities

that provide a basis for evaluating their environmental consequences together, such as common timing or geography." 40 C.F.R. § 1508.25(a). Because the FCC's communication tower registrations, approval, licensing, and regulatory programs are connected, cumulative, and similar in nature, the ongoing registration, approval, licensing, and regulatory programs of towers is an agency program for purposes of NEPA analysis, requiring a programmatic environmental impact statement.

Indeed, on November 2, 1999, the Director of the U.S. FWS sent a letter to the FCC Chairman urging the completion of a programmatic EIS under NEPA to ascertain the magnitude, causes, and avoidance measures for avian mortality at communication towers. The FCC declined to conduct an EIS and has done virtually nothing to comply with NEPA over the last four years. The FCC currently violates NEPA regularly regarding the permitting, approval, registration, operation, and licensing of communication towers. The FCC should complete a NEPA programmatic EIS to ascertain the impacts of towers on birds, the cause of those impacts, and the solutions to prevent such mortality. Under the required NEPA process, the FCC would conduct a scoping for the EIS with full public input, then it would write a draft EIS and allow full public input through comments on the draft with proposed alternatives to resolve the bird kill problem. Then a final EIS would be completed and appropriate changes made in FCC regulations and registration of towers to prevent bird mortality.

The FCC NOI deliberately omits any reference to the November 2, 1999 letter from the Director of the U.S. FWS to the FCC Chairman where the Director insists that the FCC should prepare a programmatic EIS under NEPA to delineate the extent of the mortality to birds from towers, the cause of the mortality, and to arrive at mitigation measures. In that letter, the Director references data that indicate the annual killing of migratory birds from communication towers may be 4 million to an order of magnitude above this (40 million). She points out the deficiencies in current FCC regulations that we have noted repeatedly before and notes that " ....substantial losses of migratory birds are not being accounted for in FCC's permit and NEPA decision-making process." She further notes that "The cumulative impacts of the proliferation of communication towers on migratory birds, added to the combined cumulative impacts of all other mortality factors, could significantly affect populations of many species."

In the FCC NOI at page 14, the FCC notes that it is not expert in migratory birds but the FWS is the lead Federal agency for managing and conserving migratory birds. The FCC further acknowledges that the FWS undertakes a number of bird surveys with the Regional FWS offices. The Director of the FWS, the Federal agency with this expertise in birds cited by the FCC, clearly states that the FCC should prepare a programmatic EIS under NEPA to delineate the impacts on birds and to arrive at mitigation measures. Besides the FWS, we have repeatedly urged the FCC to begin preparation of a programmatic EIS and implement required avoidance measures to prevent the deaths of millions of migratory birds. The FCC has and continues to stonewall on this issue, having made no changes to its tower program despite the urging of the Director of the FWS, the Federal agency with expertise in birds, and many others.
Almost all towers registered by the FCC are categorically excluded from environmental review by the FCC's NEPA rules. 47 C.F.R. § 1.1306. The Council on Environmental Quality's (CEQ)

NEPA regulations allow federal agencies to promulgate rules exempting some actions from NEPA analysis. 40 C.F.R. § 1500.4(p). But the FCC has severely abused its discretion by exempting almost all tower registrations. The CEQ regulations allow agencies to establish categorical exclusions only for "actions which do not individually or cumulatively have a significant effect on the human environment." As the FWS data and repeated submissions from the undersigned, scientists, and others clearly demonstrate, FCC tower registration decisions have significant effects on the human environment both individually and cumulatively by killing migratory birds, including endangered species and species of management concern listed by the FWS.

The FCC wrongfully delegates the responsibility to determine whether environmental analysis is required by NEPA to the registration applicant. 47 C.F.R. § 1.1308. In practice, the agency gives applicants virtually unlimited discretion to determine whether environmental analysis will be undertaken, and if it will, how it will be done. The FCC merely asks the applicant to submit a form containing a checklist of potential environmental impacts. In almost every case, the applicant claims that there will be no environmental impacts. The checklist does not mention tower impacts on migratory birds. Then, in almost every case, the FCC simply rubber-stamps the applicant's form in a one line conclusory review, and the tower is categorically excluded from NEPA review. The turn-around time is normally one or two days from the FCC's receipt of the application, giving citizens no opportunity for comment. This process is entirely foreign to the spirit and purpose of NEPA.

The FCC NOI appears to be another FCC delaying tactic designed to prevent the FCC from changing the status quo under which millions of migratory birds are illegally killed at communication towers while the FCC permits the construction of thousands of new towers and the operation and re-registration of tens of thousands of existing towers. There are no time limits for the completion of the NOI and no proposed actions to benefit birds and prevent the annual killing of millions of birds. The NOI could proceed indefinitely, thus providing another convenient excuse to continue the FCC's years of delays in addressing the killing of millions of migratory birds at towers. The NOI process falls completely short of required NEPA compliance and, indeed, appears to be yet another delaying tactic that prevents the FCC from making necessary changes to protect migratory birds and change the status quo. The FCC should comply with NEPA by issuing a programmatic environmental impact statement concerning the impact of communication towers registered by the FCC on migratory birds and the causes, and propose solutions, and also by reforming the agency's categorical exclusion policy so that citizens can participate in the NEPA process.

Until the FCC completes a programmatic environmental impact statement on its communication tower registration program, the agency must refrain from issuing new authorizations for towers that may adversely affect migratory birds. As clearly set forth by CEQ regulations implementing NEPA, "[u]ntil an agency issues a record of decision as provided in 40 C.F.R. § 1505.2, no action concerning the proposal shall be taken that would: (1) have an adverse environmental impact; or (2) limit the choice of reasonable alternatives." Additional authorizations of towers harmful to migratory birds will only add to the direct, indirect, and cumulative environmental

harm such towers already create. Additional authorizations will also preclude the agency from adopting reasonable alternatives for mitigating such harm, such as reduced tower size, selection of lower-impact tower locations, changes in lighting, elimination of guy wires and other such measures recommended by the U.S. Fish and Wildlife Service Guidelines and by others.

B. COMPLIANCE WITH MBTA REQUIRED.

The Migratory Bird Treaty Act (MBTA), 16 U.S.C. §§ 701 et seq, imposes an absolute prohibition on all "taking" of migratory birds, nests, and eggs, unless authorized by permit issued under regulations promulgated by the Secretary of the Department of Interior. 16 U.S.C. § 703. It is a strict liability statute which means even unintentional killing is prohibited. This prohibition applies to federal agencies like the FCC. To date, the FCC has failed to apply for a permit. The FCC has a statutory duty to take action to prevent the illegal take of migratory birds. This can be achieved by requiring communication towers to be appropriately sited, constructed, and operated through the tower registration process. Thus, the FCC violates the MBTA and the Administrative Procedure Act in authorizing the construction of towers where migratory birds will be killed at FCC authorized towers. The FCC is under a statutory duty to prevent such illegal take. The case of U.S. v. Moon Lake Electric Association, 45 FSupp 2d 1070 (1999), decided in the U.S. District Court for Colorado, and the cases cited therein clearly demonstrate the culpability of the FCC in allowing the killing of migratory birds at towers. In Moon Lake, the defendant electric co-operative was charged under the MBTA for "taking" birds through electrocution on its power lines and poles. Despite the defendants motion to dismiss based on arguments that the MBTA was a hunting statute and applied to willful takings only, the Court disagreed and ordered the case to proceed to trial. Moon Lake subsequently pled guilty and was fined $100,000. Numerous other courts have held that a government agency that issues licenses or permits to a private commercial actor, whose operations in turn injured or killed listed species, is itself liable for a "take." See, e.g., Strahan v. Coxe, 127 F.3d 155, 163 (1st Cir. 1997). The same reasoning can be applied to FCC decisions to license or register communications towers that kill species listed under the MBTA. The Court of Appeals for the District of Columbia Circuit made clear that the MBTA prohibition against take of migratory birds not only applies to private individuals and corporations but also "prohibits federal agencies from killing or taking migratory birds without a permit from the Interior department." Humane Society of the United States v. Glickman, 217 F.3d 882 (D.C. Cir. 2000). Hence, it is unlawful for the FCC to permit or register the construction of a communication tower if that tower causes the taking of a migratory bird. Such unlawfulness should cease immediately, not after years of delay, and not pending completion of a NOI. The FCC is under a statutory legal duty to change its tower procedures to prevent avian mortality.

C. COMPLIANCE WITH ESA REQUIRED.

Prior to any FCC approval of a proposed communication tower or the re-licensing of an existing tower, the FCC must consult with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act of 1973, 16 U.S.C. §§ 1531 et seq, regarding the adverse impacts of its tower registration decisions on such species. Section 7 of the ESA requires agencies to consult with the U.S. FWS when proposed actions may jeopardize threatened or endangered species.

Pursuant to the ESA and the Commission's own environmental regulations, formal consultation should be initiated with the U.S. FWS to assess the effects of its tower approvals individually and cumulatively to affect federally listed threatened or endangered species, including such migratory bird species as Red-cockaded Woodpeckers and Kirtland's Warblers that have been killed at communication towers. For a report on the September 2003 killing of an ESA listed endangered Kirtland's Warbler at a TV tower in South Carolina, see section II. D. below.

In accordance with Section 11(g)(2) of the ESA, 16 U.S.C. § 1540(g)(2), the undersigned gave notice of the violations of the ESA to the Secretary of the Department of Interior and the FCC by certified return mail receipt requested on April 12, 2001. The FCC has failed to act to end the violations.

It is important for the FCC to note and correct the deficiencies in its current regulations pertaining to threatened and endangered species. Currently, applicants for tower registrations conduct reviews that fail to identify listed species vulnerable to tower collisions and fail to identify important habitats that may be adversely affected. Instead, applicants simply check with the U.S. Fish and Wildlife Service to identify any species that have been recorded at the particular tower sites in questions. This process is deficient for three reasons.

First, the vast majority of sites affected by antenna structures have not been adequately surveyed for listed or proposed threatened or endangered species, so even if they are inhabited by such listed species, records do not necessarily exist. Secondly, critical habitat for the vast majority of listed species has yet to be mapped, even though essential habitat features may have already been described in the literature and be present on the sites.

Third, although listed species may not permanently inhabit particular sites, they may, nonetheless, use such sites periodically for feeding, breeding, migration and dispersal, and be adversely affected by fatal collisions with towers. Indeed, as clearly established by the literature and the recent killing of an endangered Kirtland's Warbler, fatal collisions with certain listed species is a reasonably foreseeable adverse impact.

Because the information supplied by tower registration applicants is so incomplete, FCC must revise its current procedures to insure that all tower applicants:

(1) conduct surveys for all possible listed and proposed species, including all mammals, birds, reptiles, amphibians, fish, invertebrates, and flowering and non-flowering plant species that may potentially inhabit the sites, use the sites to meet part of their life-cycle needs, or be adversely impacted by the proposed structures and their radio frequency emissions;
(2) conduct literature reviews to determine if the location of the proposed structures may affect any suitable or potential habitat for listed or proposed species;
(3) review bird kill data from nearby structures to determine if any listed or proposed bird species are likely to be adversely affected;
(4) determine if structures conform with the USFWS's "Guidance on the Siting, Construction, Operation and Decommissioning of Communications Towers" (9/14/2000);

(5) compile any other information available from federal, state, and local government, universities, or organizations that addresses potential conflicts between the proposed structures and listed or proposed species for listing.

If these sources of information indicate that adverse effects to listed or proposed species are likely to occur, then FCC must initiate formal consultation with the USFWS and obtain a biological opinion that sets forth reasonable and prudent measures for avoiding such effects. 50 C.F.R. § 402.14.

D. REGULATORY CHANGES REQUIRED NOW.

Even if the FCC does not proceed to complete an EIS, and continues to pursues the NOI, it should immediately revise its regulations and procedures to fulfill statutory mandates under NEPA, MBTA, and the ESA to protect migratory birds. The FCC NOI does nothing to absolve the FCC from its legal responsibilities or to resolve the current problem of existing and newly permitted towers killing migratory birds. The NOI purposefully delays any possible FCC action to change the current regulatory system or to better conserve migratory bird resources for months if not years, despite overwhelming documentation given to the FCC of significant avian mortality caused by communication towers.

Under NEPA, MBTA, and the ESA, it is the FCC which authorizes approval of towers that has responsibility for enacting measures that protect avian species for deaths caused by these FCC approved towers. The FCC should use the best available science which is contained in the Federal experts (U.S. FWS) guidelines, issued on September 14, 2000. The FCC has had these Guidelines since September 2000 and has failed to use them to protect migratory birds in its oversight of communication tower construction and operation. Conducting an Inquiry does not relieve the FCC of its duties to immediately act to prevent migratory bird deaths under the MBTA or to comply with NEPA and conduct an EIS and to comply with the ESA and consult with the FWS.

As we have repeatedly advised the FCC over the last four years, the FCC should add migratory birds to the list of impacts for which Environmental Assessments are required under 47 CFR 1.1307. This would mandate Environmental Assessments as a licensing or re-licensing requirement for construction of individual towers which may affect migratory birds. The regulations should further be changed so that the FCC, not the applicants, would prepare the Environmental Assessments in each case.

On May 1, 2003, FCC Chairman Michael Powell announced the development of the "first comprehensive strategic plan to improve the FCC's ability to protect valuable historic and environmental resources, while at the same time accelerating the process of deploying necessary communications infrastructure." Termed an Environmental and Historic Preservation Action Plan, the Chairman noted that the FCC would initiate a Notice of Inquiry to assess the impact of communications towers on migratory birds and would consider retention of a staff biologist to address avian issues, as had been done with FCC retention of a historic preservation specialist.

Unfortunately, the Action Plan has turned into a Plan of Inaction for birds. No staff biologist has been retained and the FCC has proposed no new measures to better protect migratory birds. The NOI was not published in the Federal Register until September 13, 2003, nearly 4.5 months after the Chairman's press release. The NOI proposed no new measures to protect millions of migratory birds from death at communication towers. .

II. FCC HAS RECEIVED EXTENSIVE INFORMATION INDICATING THAT COMMUNICATION TOWERS ARE A SIGNIFICANT AND CONTINUING SOURCE OF MORTALITY TO MIGRATORY BIRDS.

Over the years, the FCC Commissioners through its staff and the staff of Commissioners has received extensive documentation of the past and current killing of migratory birds at communication towers. This data has been provided to the FCC by the U.S. FWS, the undersigned groups, scientists, conservationists, and individual tower objectors, appellants, and declarants in tower appeal cases and a court suit (see In Re: Forest Conservation Council, Inc., et al., vs. FCC in the U.S. Court of Appeals for the D.C. Circuit (2003)). Accounts of bird kills at tall, lighted structures have appeared in North American scientific literature since at least 1880. Please note that reported kills represent only the tip of an iceberg as the vast majority of tower sites are never checked for mortality and even those that are, are mostly done only on a sporadic basis. The FCC has only rarely required any such mortality data collection at towers under its jurisdiction and this accounts for the lack of systematic data collection at the over 60,000 lit communication towers in the U.S. But where towers are systematically checked for avian mortality, birds are found dead especially during spring and fall migration.

Long-term studies of bird mortality at communications towers in North America all indicate that sizable kills occur on a regular basis, with occurrences depending on specific weather conditions. Hundreds of short-term studies have been conducted consisting of data gathered from just a single night or over several years. These short-term studies also document that kills occur regularly over a wide area of North America. The FCC has been repeatedly provided either hard copies of these studies or references to these studies and reports. The FCC has also been provided and has access to comprehensive bibliographies on bird kills at towers. These bibliographies, including detailed annotated ones provided by the FWS, show conclusively that communication towers have long caused significant avian mortality:

A. BIBLIOGRAPHIES.

Bird Kills at Towers and Other Man-Made Structures: An Annotated Partial Bibliography (1960-1998). This is an on-line bibliography created by the U.S. Fish and Wildlife Service's Office of Migratory Bird Management. It currently contains 125 citations, 83 of which have been published since 1980 and 24 of which are linked to Internet sites. This site has links to articles on tower kills in the popular press. Go to: http://migratorybirds.fws.gov/issues/tower.html .

Two older annotated bibliographies on birds killed at man-made structures that were published in the late 1970s by the Canadian Wildlife Service (CWS) and the United States Fish and Wildlife Service (USFWS):

Weir, R.D. 1976. Annotated bibliography of bird kills at man-made obstacles: a review of the state of the art and solutions. Can. Wildl. Serv., Ont. Reg., Ottawa. 85 pp.

Avery, M.L., P.F. Springer, and N.S. Dailey. (1980). Avian mortality at man-made structures: An annotated bibliography (revised from 1978 ed.). U.S. Fish and Wildlife Service, Biological Services Program, National Power Plant Team, FWS/OBS-80/54.

A re-compilation of these references along with updated material is now available online from the California Energy commission's web site. Avian Collision and Electrocution: An Annotated Bibliography contains entries mainly from 1876 to 1992. Go to: http://www.energy.ca.gov/reports/avian_bibliography.html

See also, Avian Mortality at Communication Towers: A Review of Recent Literature, Research, and Methodology, by Paul Kerlinger, for the U.S. FWS (March 2000).

B. FURTHER DOCUMENTATION OF BIRD KILLS AT TOWERS.
We select only a few of the references here as the FCC already has been provided the bibliographies documenting the killing of hundreds of thousands of birds as well as hard copies of many of these studies and reports and is well aware of or should be well aware of the overwhelming documentation of the seriousness of the problem.

1) At a 1999 Avian Mortality at Communication Towers Symposium at Cornell University, two scientists at the Tall Timbers Research Station in Florida (Robert L. Crawford and R. Todd Engstrom) stated: "We feel that R. D. Weir's 1976 quote still sums up the state of knowledge about these events: 'Nocturnal bird kills are virtually certain wherever an obstacle extends into the air space where birds are flying in migration. The time of year, siting, height, lighting, and cross sectional area of the obstacle and weather conditions will determine the magnitude of the kill'....Large kills almost invariably occur when migrant birds encounter inclement weather along frontal boundaries.....Some have dismissed this continuing almost certainly increasing mortality as biologically insignificant. We do not agree, because this constant decimation seems inevitably to have a cumulative effect on populations already threatened by deforestation and fragmentation, nest parasitism, pollution, and other causes." See the abstract from a paper by Crawford and Engstrom for the August 11, 1999 *Workshop on Avian Mortality at Communication Towers*. " The FCC has this information.

2) In the November 2, 1999 letter from the Director of the FWS to the FCC Chairman urging the completion of a programmatic EIS under NEPA, the Director references data that indicate the annual killing of migratory birds from communication towers may be 4 million to an order of magnitude above this. The Director notes that " ....substantial losses of migratory birds are not being accounted for in FCC's permit and NEPA decision-making process." and that "The cumulative impacts of the proliferation of communication towers on migratory birds, added to the combined cumulative impacts of all other mortality factors, could significantly affect populations of many species." The FCC has this letter.

3) Tallahassee, Florida. A 29-year study was conducted by the Tall Timbers Research Station at a Florida TV tower with its height varying over the years from 204 m (1955 to 1960) to 308 m (1960 to 1989) to 94 m (1989 to present). The study documented the killing of over 44,000 birds of 186 species, 94% of which were neotropical migrants. 971 birds were killed on one night. Characteristics of Avian Mortality at a North Florida Television Tower: A 29-year Study, Robert L. Crawford and R. Todd Engstrom, Journal of Field Ornithology: Vol. 72, No. 3, pp.380-388, (2001). The FCC has a hard-copy of this study and cites it in the NOI.

4) Eau Claire, Wisconsin. A 38-year study of a single 1,000 foot television tower in west central Wisconsin documented 121,560 birds killed representing 123 species, primarily long-distance neotropical migrants. *A Study of Bird Mortality at a West Central Wisconsin TV Tower from 1957-1995*, by Dr. Charles Kemper, The Passenger Pigeon, Vol. 58, No. 3, Pp. 219-235. 1996. Attached. The FCC has a hard-copy of this study and cites it in the NOI.

5) On January 22, 1998, from 5,000 to 10,000 birds, mostly Lapland Longspurs, were attracted by the lights and killed at a 420 foot tall communication tower and two other towers nearby in SW Kansas. The site was a natural gas facility and the mortality event occurred on a snowy, foggy night. Birds circled the tower, flew into each other, into guy wires, the tower, and some were found impaled on wheat stubble on the ground. The FCC has been aware of this incident and published reports on it and cites it in the NOI.

6) In June 2000, American Bird Conservancy completed a review of over 140 publications and compiled a list of birds killed at communication towers by species. The study documented the widespread killing of hundreds of thousands of birds at communication towers. The Report, *Communication Towers: A Deadly Hazard to Birds*, documents the killing of 230 species of birds at communication towers. Alarmingly, the species killed include an Endangered bird (Red-cockaded Woodpecker) and 51species on either the U.S. Fish and Wildlife Service's Species of Management Concern List or the Partners in Flight Watch List. The ABC study confirms what the Eau Claire, Wisconsin and Tall Timbers, Tallahassee, Florida tower studies found: over 90% of the birds killed are neotropical migratory birds, and most migrate at night. FWS Species of Special Management Concern are birds that the FWS believes are likely to become candidates for listing under the ESA unless conservation measures are taken. Documented tower kills of these birds include over 17,000 Tennessee Warblers at 32 towers, 6,000 Blackpoll Warblers at 32 towers, and 2,000 Black-throated Blue Warblers at 25 towers. The Cerulean Warbler is listed as a bird of extremely high priority by the FWS because its population is believed to be in jeopardy. An ESA listing petition is pending before the FWS. Over 150 of these neotropical migrants have been recorded killed at only five towers. Each FCC Commissioner was mailed a hard-copy of the ABC Report with this information in June 2000 by ABC with a cover letter urging action. All other relevant FCC staff have received a copy of this Report. To view the Report, go to:
www.abcbirds.org/policy/towerkillweb.pdf.

7) Nashville, Tennessee. From 1960-1997, 19,880 birds of 112 species were collected from a 1,368-ft TV tower in Nashville, Tennessee. It was checked daily in the migration seasons. See www.towerkill.com. The FCC is aware of this study.

8) South Wales and Colden, New York. In 1966, Arthur R. Clark, currently associate curator of vertebrate zoology at the Buffalo Museum of Science, began a long-term study at three TV towers in southern Erie County. WGRZ-TV, a 1,000-foot tower (2,310-feet above sea level) located on Warner Hill Road in South Wales was built in 1954. In Colden, NY, the 750' WIVB - TV tower (2,380-feet above sea level) was built in 1948; it was joined 14 years later by the 1,076-foot WKBW -TV tower (2,808-feet above sea level). Clark checks the towers in the fall only and to date, he has found just over 20,000 individuals of 110 species. Clark based his master thesis on early data from this study. He is currently compiling this monumental data set for publication. His is the second-longest tower-kill study in North America. Before 1966, two of these towers were studied by Ken Able and Richard Roche. See www.towerkill.com. The FCC is aware of this study.

9) Elmira, New York. In 1963, Wilifred Howard began a long-term study at an 850-foot tower (2,549-feet above sea level) located on Hawley Hill about 3 miles WNW of Elmira, NY. The tower originally broadcast WSYE-TV and now holds transmitters for WETM-TV and WENY-TV. Wilifred Howard, with many volunteers, checked the tower for 20 fall migration seasons. Documented mortality averaged more than 500 birds per fall over the 20 years of the study. The low fall season total was 45 birds in 1967 and the high fall season total was 3,862 in 1977. The highest one-night total was 1,817 on September 19-20, 1977. It appears when reading the accounts that consistent efforts were made to check the tower first thing in the morning during the fall monitoring period. Evidence of scavenging was noted and about 30% of the area under the tower was inaccessible for surveying. So, actual kills were likely to be considerably larger. Regular but small kills were tallied in August and the most significant kills were noted in the latter half of September and early October. For further details on this study see New York Report #1 at www.towerkill.com. The FCC is aware of this study.

10) Topeka, Kansas. A single TV tower near Topeka, Kansas (~1,400 feet) was searched for avian mortality during four significant mortality events only on a few dates in 1985, 1986, and 1994. The surveys found 2,808 dead birds from 91 species. *Recent Bird Mortality at a Topeka Television Tower*, Ball et al., Kansas Ornithological Society Bulleting, Vol. 46, No. 4, (December 1995). The FCC has a hard-copy of this study.

11) Eastern North Carolina. Two TV towers, one in Bladen County, one in Brunswick County, North Carolina, caused 5,070 avian deaths of 84 species on 42 occasions during September-November 1971-1972. On October 30, 1970, 1,000 birds were killed on that one night at the Bladen County TV tower. *TV Tower Kills in Eastern North Carolina*, Carter, J.H., and J.F. Parnell Chat 40: 1-9 (1976). The FCC is aware of this study.

12) Pompey and Alfred, New York. Towerkill study efforts have been carried out at these sites in New York. Fritz Scheider, Dorothy Crumb, and members of the Onondaga Audubon Society checked the WIXT-TV 960-foot tower (2,550' above sea level) near Pompey, NY on selected

nights during the 1970s and 1980s. Results from this study have periodically been published in THE KINGBIRD. One particularly notable kill occurred sometime between September 4-9, 1981. After returning from Labor Day weekend, the station engineer found a large kill and notified local birders. 912 dead birds of 39 species were collected under the tower. Many more were likely eaten by scavengers. Clarence Klingensmith and Elizabeth Brooks checked a 219-foot (2502-feet above sea level) microwave tower near the city of Alfred, NY during the 1980s. It is a free standing lighted tower structure without guy wires. While it is a relatively short tower, this structure is built on a 2300-foot hilltop, one of the highest in the region. Dozens of bird fatalities were documented. See www.towerkill.com. The FCC is aware of this study.

13) Western New York and Youngstown, Ohio. This study released in 2003 documents 20,146 birds killed of 106 species at three TV towers in New York state and 4,310 of species at a single Youngstown, Ohio TV tower. Night migrating warblers were the birds most often killed. The towers were visited from 8-27 days from 1976 to 1999 and 67 days in 1970. The researchers note that "Collisions with towers, support wires, and lighted buildings are a frequent source of mortality for these migrants. Another source of mortality results from the apparent attraction of many birds toward light. Television and radio towers with red beacons, white strobe lights, and floodlights have a tendency to attract nocturnal migrants, although there is some evidence that towers with white strobe lights attract fewer migrants." *Television Tower Mortality of Migrant Birds in Western New York and Youngstown, Ohio*, Morriss, S.R., Clark, A.R., Bhatti, L.H., and Glasgow, J.L., Northeastern Naturalist 10(1):67-76 (2003). The FCC has a hard copy of this study.

C. SMALLER TOWERS.

An issue of whether shorter towers kill migratory birds has been raised.

1) At Rock State Forest, West Virginia a 100' tower caused avian mortality. On 20 October 1975, following a night of fog and rain, 73 birds of 21 species were found dead at the Sand Springs fire tower on Chestnut Ridge, Cooper's Rock State Forest, WV. The tower is 100-feet tall and sits atop the 2600-ft ridge. It was not lighted and no lights existed anywhere in that part of the forest at the time of the kill. There were no guy wires on the fire tower (B. Wylie, pers. comm.). The kill suggests that a heavy concentration of migrants were moving along the ridge at night and died in blind collision with the fire tower structure. Bird kill at Chestnut Ridge, Wylie, B. (1977), Redstart 44(2):65. The FCC is aware of this study.

2) The substantial mortality at the SW Kansas natural gas facility (cited above) where the tallest tower was 420' also documents that towers under 450' can and do cause serious avian mortality.

D. SUBSTANTIAL TOWER KILLS CONTINUE, INCLUDING ENDANGERED SPECIES.

Mt. Pleasant, South Carolina–September 2003. Will Post, Curator of Ornithology at the Charleston, SC Museum reports that he found a dead Kirtland's Warbler, a Federally listed endangered species, under the Channel 2 TV tower at Mt. Pleasant, SC at about 08:00 on 08 September 2003. It was identified by comparison with specimens in the Charleston Museum collection. Upon dissection, he determined that it was a juvenile (hatch-year) female, with extremely heavy fat deposits. The specimen has been preserved as a study skin and fluid-preserved body. The catalog number is Charleston Museum 2003.38. At this same site, on the

same morning that he picked up the Kirtland's Warbler, he also salvaged 207 birds of 14 other species. Ovenbirds composed the majority (154), followed by Common Yellowthroats (14), Red-eyed Vireos (7), Northern Waterthrushes (6), Prothonotary Warblers (5), Worm-eating Warblers (4). A kill also occurred at this site on the previous night. Collected were 121 individuals of 13 species. Again, most were Ovenbirds (89), followed by Red-eyed Vireos (12), Northern Waterthrushes (3), Black-throated Blue Warblers (3) and Common Yellowthroats (3). The migratory movement was associated with a cold front that arrived in the area on the afternoon or evening of 7 September. On both nights, it rained, and there was a low cloud ceiling. The TV tower is 719 feet tall. The tower has an array of red, incandescent warning beacons that flash in random order. Mortality to nocturnal migrants has occurred at this tower since at least 1962. On 6-8 September 1962, cooperators of the Charleston Museum picked up 1,604 birds of 40 species. Most common were: Ovenbirds (560), Red-eyed Vireos (560), Am. Redstarts (340), Black-and-White Warblers (40), Worm-eating Warblers (19), Prothonotary Warblers (18), Black-throated Blue Warblers (12), Kentucky Warblers (11), Northern Waterthrushes (10). Since 1984, a number of kills have occurred at this tower and another tower, Channel 4, which is about 5 miles east. Mortality also continues to occur at the latter tower. Two other coastal TV towers, at Awendaw, about 10 miles NE of the Mt. Pleasant towers, also had significant kills during the early 1980s. About 1990 these towers switched from red incandescent lights to white strobe lights, and Will Post and others have found few dead birds around them since. To contact Will Post to verify this data, call his home at: 843-883-9626 or his office at 843-722-2996, ext. 249. His email is: grackler@aol.com .

E. MANY BIRDS KILLED ARE OF DECLINING SPECIAL CONCERN SPECIES.

In June 2000, American Bird Conservancy completed a review of over 140 publications and compiled a list of birds killed at communication towers by species. The study documented the widespread killing of hundreds of thousands of birds at communication towers. The Report, *Communication Towers: A Deadly Hazard to Birds*, documents the killing of 230 species of birds at communication towers. Alarmingly, the species killed include a Federally Endangered bird (Red-cockaded Woodpecker) and 51species on either the U.S. Fish and Wildlife Service's Species of Management Concern List or the Partners in Flight Watch List. These species are at risk and without strong management actions may one day be listed under the Endangered Species Act. The species of concern killed at towers are mostly neo-tropical migratory songbirds that migrate at night such as Tennessee Warblers, Golden-winged Warblers, Ovenbirds, Palm Warblers, Henslow's Sparrow, Bachman's Sparrow, Painted Buntings, Seaside Sparrows, Dickcissels, Wood Thrushes, and Bobolinks. The Report notes that reported kills represent only the tip of an iceberg as the vast majority of tower sites are never checked for mortality and even those that are, are done only on a sporadic basis. The ABC study confirms what most studies, including the Eau Claire, Wisconsin and Tall Timbers, Tallahassee, Florida tower studies found: over 90% of the birds killed are neotropical migratory birds, and most migrate at night.

F. MANY BIRDS KILLED ARE QUICKLY SCAVENGED.

Of great importance to the FCC's consideration of avian mortality at communication towers is that all the literature and reports of dead birds at towers rely on the physical collection/and or counting of carcasses. From research conducted on the placement of 78 bird carcasses in corn fields, 77% of all such carcasses were removed by predators and scavengers within 24 hours of

their placement. Over 86% disappeared within 24 hours, and by day 5, only 8% of the bird carcasses remained. See *Songbird Carcasses Disappear Rapidly from Agricultural Fields* by R. Balcomb in the Auk, 103:817-820. The FCC has a hard copy of this study. This disappearance is caused by scavengers such as crows, ravens, owls, vultures, skunks, racoons, foxes, and cats taking and eating the carcasses. Therefore, reported mortality is substantially understated in the literature and reports. Further, the vast majority of the over 60,000 lit communication towers in the U.S. have not been monitored for avian mortality and only a few towers have any long term monitoring. This is why it is essential for the FCC to require that tower operators conduct monitoring on a regular basis to record avian mortality on an annual basis. This monitoring should be required for all extant towers as well as new towers. Local bird clubs may be willing to volunteer to do this monitoring. Operators of wind turbines commonly are required by regulators to monitor the turbines and collect avian mortality data, but the FCC has refused to do so despite repeated requests. Now, through its NOI, the FCC will discover what it already knew for over four years---since it does not require any environmental assessment of or EIS concerning towers impacts to migratory birds and requires zero monitoring of towers, most towers are not monitored for avian mortality and only a few have systematic avian mortality monitoring. The FCC already knows this and also knows that despite this, there is still significant documentation of avian mortality at communication towers. The documentation is substantial enough that the FCC is required to act under NEPA, MBTA, and ESA (see above).

III. RESOLUTIONS ADOPTED URGING ACTION ON TOWER KILLS; WORKGROUPS.

1) In April 1998, the major scientific ornithological societies adopted and passed unanimously a Resolution urging action on avian mortality at communication towers. Scientists from the American Ornithologists' Union, Association of Field Ornithologists, Cooper Ornithological Society and Wilson Ornithological Society supported action on this problem at their meeting in St. Louis, Missouri. The FCC has had a copy of this resolution since 1998.

2) Also in 1998, the Policy Council of American Bird Conservancy unanimously passed a similar Resolution urging action by the FCC and others to address avian mortality at communication towers. The Policy Council has 85 conservation and scientific organizations as members. The FCC has had a copy of this resolution since 1998.

3) In June 1999 a meeting was held by RESOLVE in Washington, DC on towers killing birds and the FCC was represented. The FCC heard presentations on the substantial mortality to migratory birds caused by towers and the need for FCC action. All agreed to the formation of a Communication Tower Working Group (CTWG), chaired by the U.S. FWS.

4) ABC, the U.S. FWS, and The Ornithological Council co-sponsored an Avian Mortality at Communication Towers Workshop at Cornell in Ithaca, New York. Presentations were made by scientists on the extent and solutions of the problem and the FCC gave a presentation, as well. The FCC attended the entire workshop, heard documentation of the problem and heard solutions. For the proceedings and abstracts of all papers, go to:

http://www.towerkill.com/workshop/proceedings/index.html. The FCC has had access to these proceeding since 1999.

5) The CTWG has expanded to include all stakeholders and the FCC has attended all meetings. The last meeting in 2002 had 56 participants. At these meetings, the FCC has failed to offer any support for research or monitoring at communication towers on avian mortality despite a National Fish and Wildlife Foundation offer of a 50-50 funding match. Further, the FCC has refused to change any of its tower permitting and registration processes or rules, despite much evidence of bird kills at towers presented at these meetings.

IV. WHAT CAUSES AVIAN MORTALITY AT TOWERS.

The best science available indicates that particularly in poor visibility weather conditions at night, lights on towers (especially red solid state red lights) disrupt a neotropical migratory bird's celestial navigation system and perhaps its magnetic navigation system. This resulting disorientation causes the birds to fly to the light source and circle the light source at the tower, causing the bird to be unable to establish its directional cues, and greatly increase its probability of striking the tower and guy wires, flying into other birds also circling, or losing most navigational capability and flying into the ground or ancillary structures. Documentation of this is found in several scientific documents, for example:

The behavioral responses of migrating birds to different lighting systems on tall towers, Sidney A. Gauthreaux, Jr., Ph.D., and Carroll G. Belser, Department of Biological Sciences, Clemson University, Clemson, SC 29634-1903. Author's abstract for the Avian Mortality at Communications Towers Workshop, August 11, 1999 at Cornell University. The influences of both red and white light on the flight and orientation behavior of nocturnally migrating birds were investigated by 2 means in an attempt to assess the possibility that strobe lights may deter birds from colliding with tall man-made structures and aircraft. The first method examined the number and behavior of nocturnal migrants flying near a strobe-lit FM radio tower and over a control area during spring migration as well as near a red-lit television tower, a white strobe-lit television tower, and over a control area that had no light during fall migration. The results show that numbers of birds at each site were not significantly different; however, the proportion showing curved, circling, or hovering behavior was significantly higher at the red-lit television tower than at the strobe-lit television tower and the control site. The proportion of birds showing one or more of these "non-straight" flight responses was also higher at the strobe-lit towers than at the control sites during both the spring and fall studies. The findings provide important information on the "best lighting configurations" for man-made obstructions that can be used to minimize the collisions of migrating birds with these structures at night. White strobes attract fewer birds.

Why be concerned about light pollution?, Broderick, B., Royal Astronomical Society of Canada Bulletin (June 1995). Over a period of 10 years, nearly 23,000 birds were killed by flying into floodlight lit smokestacks at a power plant near Kingston, Canada. The problem was resolved by replacing the floodlights with a white strobe light. Other research shows that on nights with poor visibility when birds are attracted to lit towers and encircling a tower, turning off the lights

results in an almost immediate response by the birds. They stop circling and leave the tower and resume their migration.

Attraction of nocturnal migrants by lights on a television tower, Cochran, William W. and Richard R. Graber, Wilson Bulletin, 70:378-380, (1958). Cochran and Graber made visual and acoustic observations of birds circling a 984-ft TV tower near Champaign, Illinois during a night with overcast and light mist. They counted call notes from migrants and made observations of the number of birds flying in the vicinity of the tower with a spotlight. Cochran was the engineer at the TV station and was able to control the lighting of the tower. By turning off the lights for short periods of time, he and Graber were able to confirm what many had suspected - that lights were causing the birds to concentrate around the tower. Within a short period of turning off the tower lights, the swarm of birds hanging around the tower dispersed.

Some birds also fly directly into the tower structure and guy wires, even in day time but all mass mortalities have been recorded at night, almost always during low cloud ceiling/poor visibility. There is much more in the scientific literature on the causes of tower kills, e.g. see the proceedings of the Avian Mortality at Communication Towers Workshop at: http://www.towerkill.com/workshop/proceedings/index.html

See also paragraph II. D. above reporting on the recent bird kill at a Mt. Pleasant, South Carolina TV tower in September 2003. Will Post, Curator of Ornithology at the Charleston, SC Museum reports that during a low cloud ceiling, rainy two nights, 329 dead neotropical migratory birds were collected, including an Endangered Kirtland's Warbler. Two other coastal TV towers, at Awendaw, about 10 miles NE of the Mt. Pleasant towers, also had significant kills during the early 1980s. About 1990 these towers switched from red incandescent lights to white strobe lights, and Will Post and others have found few dead birds around them since. This verifies what researchers have suggested and what the FCC has known for years as to use of minimal lighting and white strobes: they cause significantly less mortality than red solid state or pulsating lights. As noted in the U.S. FWS Tower Siting Guidelines "Current research indicates that solid or pulsating (beacon) red lights attract night-migrating birds at a much higher rate than white strobe lights."

V. PREVENTING MORTALITY.

The best science currently available to prevent avian mortality at communication towers is incorporated into the U.S. FWS Guidance Document on the Siting, Construction, Operation and Decommissioning of Communications Towers issued on September 14, 2000. A copy of that document was provided the FCC in September 2000 and has been repeatedly discussed with the FCC since September 2000. The NOI mentions these Guidelines. On November 20, 2000, the U.S. FWS Director wrote to the FCC Chairman, attaching the Guidelines and urging the Chairman to "....make the interim guidelines available to all applicants requesting Federal communication licenses, in order to distribute the information more widely among the....industries." The Director noted that the Guidelines represent "the best measures available for avoiding fatal bird collisions" and "While there is a considerable body of research available on bird strikes at towers and the measures which can be taken to avoid them, this knowledge is

not widely known outside the academic community....We believe that widespread use of these guidelines will significantly reduce the loss of migratory birds at towers."

The U.S. FWS, scientists, conservationists, and the undersigned have cited these Guidelines repeatedly to the FCC and have urged the FCC to adopt them in their current system of authorizing, licensing, approving, and registering communication towers. Despite the urging by the FCC acknowledged bird experts at the FWS and others experts in bird migration and tower kills, the FCC has refused to adopt the Guidelines or any part of them in its system of authorizing, licensing, approving, and registering communication towers. In fact, the FCC has done nothing to change the existing system to better protect birds. A number of counties and municipalities have adopted the FWS Tower Guidelines. For example, both Brevard and Leon Counties, Florida have adopted ordinances requiring compliance with the FWS Guidelines.

In issuing the Guidelines, the U.S. FWS Director repeated concerns that the "The construction of new towers creates a potentially significant impact on migratory birds, especially some 350 species of night-migrating birds. Communication towers are estimated to kill 4-5 million birds per year, which violates the spirit and intent of the Migratory Bird Treaty Act and CFR Part 50 designed to implement the MBTA. Some of the species are also protected under the Endangered Species Act and Bald and Golden Eagle Act." The Director noted that "These guidelines were developed by Service personnel from research conducted in several eastern, midwestern, and southern states, and have been refined through Regional review. They are based on the best information available at this time, and are the most prudent and effective measures for avoiding bird strikes at towers. We believe that they will provide significant protection for migratory birds pending completion of the Working Group's recommendations. As new information becomes available, the guidelines will be updated accordingly." The FCC has had these comments, that accompanied the Guidelines, since September 2000 from the FWS Director. The FCC has chosen to ignore these guidelines and after two years chose simply to post a reference to them on their web site.

In the FCC NOI at page 14, the FCC notes that it is not expert in migratory birds and that the U.S. FWS is the lead Federal agency for managing and conserving migratory birds. The FCC further acknowledges that the FWS undertakes a number of bird surveys with the Regional FWS offices and thus possesses expertise in migratory bird issues. The Director of the FWS, the Federal agency with this FCC acknowledged expertise in birds, clearly states that the Guidelines represent the best science currently available to prevent avian mortality at communication towers and "....are the most prudent and effective measures for avoiding bird strikes at towers. We believe that they will provide significant protection for migratory birds....". The FCC should adopt these measures delineated in the Guidelines to prevent the deaths of millions of migratory birds and to comply with NEPA, MBTA, and the ESA. The NOI requests "comment on whether certain measures might minimize any adverse impacts of communications tower siting and construction on migratory birds, whether any such measures are supported by adequate and reliable empirical and/or scientific evidence, and how the use of such measures may affect the ability of licensees and other parties to provide efficient and reliable communication services."

As noted above by the FWS Director, the Guidelines "were developed by Service personnel from research conducted in several eastern, midwestern, and southern states, and have been refined through Regional review. They are based on the best information available at this time, and are the most prudent and effective measures for avoiding bird strikes at towers. We believe that they will provide significant protection for migratory birds." We believe and the Director believes that the measures in the Guidelines are supported by "adequate and reliable empirical and/or scientific evidence". Further, The FCC has and continues to stonewall on this issue, having made no changes to its tower program despite the urging of the Director of the FWS, the Federal agency with expertise in birds and many others. Further, the application of the Guidelines should not in any way hinder the provision of efficient and reliable communication services. Simply co-locating antennae, keeping towers under 200' to avoid lighting where possible, building monopole towers where possible, keeping lighting to the minimum required by the FAA, and using white strobe lights at no more than 20 pulses a minute cannot possibly inhibit the provision of efficient and reliable communication services. As long as the antennae is up and operating, the color or pulsing of aviation warning lights or whether the antennae is co-located cannot possibly inhibit communication services but could determine if millions of migratory birds will meet their deaths at towers.

Here are the mitigation measures from the FCC Guidelines document that should be immediately adopted by the FCC to better protect birds:

1. Any company/applicant/licensee proposing to construct a new communications tower should be strongly encouraged to collocate the communications equipment on an existing communication tower or other structure (*e.g.,* billboard, water tower, or building mount). Depending on tower load factors, from 6 to 10 providers may collocate on an existing tower.

2. If collocation is not feasible and a new tower or towers are to be constructed, communications service providers should be strongly encouraged to construct towers no more than 199 feet above ground level (AGL), using construction techniques which do not require guy wires (*e.g.,* use a lattice structure, monopole, etc.). Such towers should be unlighted if Federal Aviation Administration regulations permit.

3. If constructing multiple towers, providers should consider the cumulative impacts of all of those towers to migratory birds and threatened and endangered species as well as the impacts of each individual tower.

4. If at all possible, new towers should be sited within existing "antenna farms" (clusters of towers). Towers should not be sited in or near wetlands, other known bird concentration areas (*e.g.,* state or Federal refuges, staging areas, rookeries), in known migratory or daily movement flyways, or in habitat of threatened or endangered species. Towers should not be sited in areas with a high incidence of fog, mist, and low ceilings.

5. If taller (>199 feet AGL) towers requiring lights for aviation safety must be constructed, the minimum amount of pilot warning and obstruction avoidance lighting required by the FAA

should be used. Unless otherwise required by the FAA, only white (preferable) or red strobe lights should be used at night, and these should be the minimum number, minimum intensity, and minimum number of flashes per minute (longest duration between flashes) allowable by the FAA. The use of solid red or pulsating red warning lights at night should be avoided. Current research indicates that solid or pulsating (beacon) red lights attract night-migrating birds at a much higher rate than white strobe lights. Red strobe lights have not yet been studied.

6. Tower designs using guy wires for support which are proposed to be located in known raptor or waterbird concentration areas or daily movement routes, or in major diurnal migratory bird movement routes or stopover sites, should have daytime visual markers on the wires to prevent collisions by these diurnally moving species. (For guidance on markers, see *Mitigating Bird Collisions with Power Lines: The State of the Art in 1994*, Avian Power Line Interaction Committee (APLIC) (1994), Edison Electric Institute, Washington, D.C., 78 pp, and *Suggested Practices for Raptor Protection on Power Lines*, Avian Power Line Interaction Committee (APLIC) (1996), Edison Electric Institute/Raptor Research Foundation, Washington, D.C., 128 pp. Copies can be obtained via the Internet at http://www.eei.org/resources/pubcat/enviro/, or by calling 1-800/334-5453.

7. Towers and appendant facilities should be sited, designed and constructed so as to avoid or minimize habitat loss within and adjacent to the tower "footprint". However, a larger tower footprint is preferable to the use of guy wires in construction. Road access and fencing should be minimized to reduce or prevent habitat fragmentation and disturbance, and to reduce above ground obstacles to birds in flight.

8. If significant numbers of breeding, feeding, or roosting birds are known to habitually use the proposed tower construction area, relocation to an alternate site should be recommended. If this is not an option, seasonal restrictions on construction may be advisable in order to avoid disturbance during periods of high bird activity.

9. In order to reduce the number of towers needed in the future, providers should be encouraged to design new towers structurally and electrically to accommodate the applicant/licensee's antennas and comparable antennas for at least two additional users (minimum of three users for each tower structure), unless this design would require the addition of lights or guy wires to an otherwise unlighted and/or unguyed tower.

10. Security lighting for on-ground facilities and equipment should be down-shielded to keep light within the boundaries of the site.

11. If a tower is constructed or proposed for construction, Service personnel or researchers from the Communication Tower Working Group should be allowed access to the site to evaluate bird use, conduct dead-bird searches, to place net catchments below the towers but above the ground, and to place radar, Global Positioning System, infrared, thermal imagery, and acoustical monitoring equipment as necessary to assess and verify bird movements and to gain information on the impacts of various tower sizes, configurations, and lighting systems.

12. Towers no longer in use or determined to be obsolete should be removed within 12 months of cessation of use.

13. In order to obtain information on the extent to which these guidelines are being implemented, and to identify any recurring problems with their implementation which may necessitate modifications, letters provided in response to requests for evaluation of proposed towers should contain the following request: "In order to obtain information on the usefulness of these guidelines in preventing bird strikes, and to identify any recurring problems with their implementation which may necessitate modifications, please advise us of the final location and specifications of the proposed tower, and which of the measures recommended for the protection of migratory birds were implemented. If any of the recommended measures can not be implemented, please explain why they were not feasible."

VI. FCC ACTIONS REQUIRED TO COMPLY WITH FEDERAL LAWS.

We believe that bird kills at communication towers could be greatly reduced, if not eliminated, with action, not NOI's, by the FCC. We urge the FCC to end the stonewalling and:

1) Adopt the FWS Guidelines for the siting and construction of communication towers as part of regulatory changes.

2) End the FCC categorical exclusion of tower registration, siting and construction from environmental review by the FCC's NEPA rules at 47 C.F.R. § 1.1306.

3) Add migratory birds to the list of impacts for which Environmental Assessments are required under 47 CFR 1.1307. This would mandate Environmental Assessments as a licensing or re-licensing requirement for construction of individual towers which may affect migratory birds. The regulations should further be changed so that the FCC, not the applicants, would prepare the Environmental Assessments in each case. This would entail the hiring of a full time biologist with knowledge of avian migration and towers to review applications and assure that tower siting and construction would be conducted so as to avoid or minimize avian mortality.

4) Adopt the FWS Guidelines and make the other changes suggested in this section for the siting and construction of communication towers to prevent the killing of migratory birds to comply with the Migratory Bird Treaty Act, 16 U.S.C. §§ 701 et seq. The MBTA imposes an absolute prohibition on all "taking" of migratory birds, unless authorized by permit issued under regulations promulgated by the Secretary of the Department of Interior. 16 U.S.C. § 703.

5) Require that tower operators conduct monitoring on a regular basis to record avian mortality on an annual basis. This monitoring should be required for all extant towers as well as new towers.

6) Consult with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act, 16 U.S.C. §§ 1531 et seq, regarding the adverse impacts of its tower registration decisions on listed species and adopt measures to prevent such adverse impacts.

7) Complete a programmatic EIS under NEPA to ascertain the magnitude, causes, and best avoidance measures for avian mortality at communication towers.

The FCC should immediately implement items 1) through 6) above and begin the EIS under item 7). Delaying action pending the NOI or EIS is contrary to existing federal laws as noted above.

Respectfully Submitted,

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